WASTE MANAGEMENT

WASTE MANAGEMENT
601 Madison Road
East St Louis, IL 62201
(618) 271-6788
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January 23, 2017

Ms. Yasmine Keppner-Bauman, Manager
Illinois Environmental Protection Agency
Bureau of Air – Compliance Section #40
1021 North Grand Avenue East
Springfield, Ill 62702

163075AAL – St. Clair County
Cottonwood Hills Recycling and Disposal Facility

NSPS Semi-Annual Report for Period July 1, 2016 to December 31, 2016

Dear Ms. Keppner-Bauman:

This letter transmits the NSPS Semi-Annual Report for the above referenced reporting period at the above referenced facility.

If you have any questions or require additional information, please call me at (314) 568-2025.

Sincerely,
Waste Management of Illinois, Inc.

Ernest H Dennison, PE
District Engineer

cc: IEPA – Collinsville Field Office
2009 Mall Street
Collinsville, Illinois 62234

COTTONWOOD HILLS
RECYCLING AND DISPOSAL FACILITY

NSPS SEMI-ANNUAL REPORT

For the Reporting Period
07/01/16 to 12/31/16

Prepared By
Waste Management of Illinois, Inc.

January 2017

1.0 Introduction

This document consists of the semi-annual report for the Waste Management of Illinois, Inc. (WM) Cottonwood Hills Recycling and Disposal Facility in Marissa, Illinois and has been prepared in accordance with 40 CFR 60.757(f). This report covers the period of gas system operations from July 1, 2016 to December 31, 2016.

The facility's gas collection and control (GCCS) system is operated, maintained, and monitored by the WM facility gas technicians under the guidance and direction of the WM gas operations manager.

2.0 Monitoring Summary

2.1 Exceedance of Applicable Parameters Monitored Under 40 CFR 60.756(a)

Gauge Pressure at each Gas Collection Wellhead (40 CFR 60.756 (a)(1))

There were some instances of positive pressure measured at gas wellheads during the reporting period. Based on a review of the data collected by the WM facility gas technicians and subsequently downloaded from the WM database, any positive pressure exceedances which were detected had a corrective action initiated within 5 days and returned to negative pressure within 15 days. In accordance with 40 CFR 60.753(g), since corrective actions were taken as specified, these exceedances are not violations of the operational requirements in 40 CFR 60.753. A summary of the positive pressures are include in the table in Attachment 1.

Monthly Oxygen or Nitrogen Concentration at Each Gas Collection Wellhead (40 CFR 60.756(a)(2))

There were some instances of oxygen exceedances measured at gas wellheads during the reporting period. Based on a review of the data, any oxygen reading in excess of the regulatory limits of 5% had a corrective action initiated within five days. All affected wells were either brought into compliance within 15 days, subject to a higher operating value (HOV) request submitted, or corrected by system expansion (including well and header repair and/or replacement) within 120 days. The affected wellheads are summarized in the table in Attachment 1.

Note that GT05 remains subject to corrective action after the conclusion of this reporting period; its compliance status will be addressed in the next semi-annual report. In accordance with 40 CFR 60.753(g), since corrective actions were taken as specified, these exceedances are not violations of the operational requirements in 40 CFR 60.753.

Temperature of the landfill gas at each wellhead (40 CFR 60.756(a)(3))

There were some instances of temperature exceedances measured at gas wellheads during the reporting period. Based on a review of the data, any temperature reading in excess of the regulatory limits of 131°F had a corrective action initiated within five days. All affected wells were either brought into compliance within 15 days, subject to a higher operating value (HOV) request submitted to the USEPA, or corrected by system expansion (including well and header repair and/or replacement) within 120 days.

In accordance with 40 CFR 60.753(g), since corrective actions were taken as specified, these exceedances are not violations of the operational requirements in 40 CFR 60.753. Affected wells are summarized in the table in Attachment 1. Copies of approved and pending higher operating value (HOV) requests are included in Attachment 2.

Please note minor modification permit applications have been submitted to the IEPA-BOA to incorporate the USEPA temperature variance approvals into the facility's CAAPP Permit

2.2 Exceedance of Applicable Parameters Monitored Under 40 CFR 60.756(b)

There are no enclosed combustors at the site, so this requirement is not applicable.

2.3 Exceedance of Applicable Parameters Monitored Under 40 CFR 60.756(c)

A utility flare is used to control collected gas at Cottonwood Hills RDF. The unit utilizes a thermocouple to indicate presence of flame. In July 2016, a PLC malfunction event occurred, allowing landfill gas to be routed to the flare without a flame present for a total of 4.84 hours.

The gas collection system at Cottonwood Hills RDF does not have a bypass line. Therefore, there were no periods of time that flow was diverted through a bypass line. All flow was directed to the permitted control device (open flare).

2.4 Exceedance of Applicable Parameters Monitored Under 40 CFR 60.756(d)

There are no alternative control devices at the site, so this requirement is not applicable.

3.0 Downtime Summary

3.1 Control Device Downtime Greater than One Hour

A summary of periods when the control device (open flare) was not operating for more than one hour is provided in Attachment 3.

3.2 Collection System Downtime in Excess of Five Days

There were no periods of time during which the collection system was not operating for more than 5 days during the reporting period.

4.0 Surface Emission Monitoring

The quarterly methane surface emissions scans were conducted at the landfill by the WM gas technician(s) Mike McElvain and/or Brad Anderson. A Table of any exceedances noted in their surface emissions monitoring inspections is provided in Attachment 4. All exceedances were corrected within the required timeframes. In accordance with 40 CFR 60.753(g), since corrective actions were taken as specified, any exceedances are not violations of the operational requirements in 40 CFR 60.753.

5.0 Collection System Expansion

There were additional gas collection wells installed during the reporting period. Dates and locations of these wells are included in Attachment 5.

CERTIFICATION

I certify under penalty of law that, based on information and belief formed after reasonable inquiry, the statements and information contained in this report are true, accurate and complete to the best of my knowledge.

Authorized Signature By:

Joe Durako	Senior District Manager
Authorized Signature	Title of Signatory
Joe Durako	1-23-17
Name (printed)	Date

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF AIR POLLUTION CONTROL -- PERMIT SECTION
P.O. BOX 19506
SPRINGFIELD, ILLINOIS 62794-9506

FOR APPLICANT'S USE
Revision #: _____
Date: ____ / ____ / ____
Page _____ of _____
Source Designation: _____

DELEGATION OF AUTHORITY FOR RESPONSIBLE OFFICIAL TO A REPRESENTATIVE

FOR AGENCY USE ONLY
ID NUMBER:
PERMIT #:
DATE:

THIS FORM SHALL BE USED BY A RESPONSIBLE OFFICIAL TO DELEGATE AUTHORITY TO A REPRESENTATIVE OF SUCH PERSON FOR SIGNATURE ON APPLICATIONS OR CERTIFICATION OF REPORTS TO BE SUBMITTED PURSUANT TO THE CLEAN AIR ACT.

THIS FORM SHALL ONLY BE USED FOR A CORPORATION AT WHICH A PRESIDENT, SECRETARY, TREASURER, OR VICE-PRESIDENT OF THE CORPORATION IN CHARGE OF BUSINESS FUNCTION, OR ANY OTHER PERSON WHO PERFORMS SIMILAR POLICY OR DECISION MAKING FUNCTIONS FOR THE CORPORATION TO TRANSFER THE AUTHORITY AS A RESPONSIBLE OFFICIAL TO A REPRESENTATIVE OF SUCH PERSON. THE REPRESENTATIVE OF SUCH PERSON MUST BE RESPONSIBLE FOR THE OVERALL OPERATION OF ONE OR MORE MANUFACTURING, PRODUCTION, OR OPERATING FACILITIES APPLYING FOR OR SUBJECT TO A PERMIT.

NOTE: THIS TRANSFER OF DELEGATION OF AUTHORITY IS APPLICABLE ONLY IF THE FACILITY EMPLOYS MORE THAN 250 PERSONS OR HAS A GROSS ANNUAL SALES OR EXPENDITURES EXCEEDING $25 MILLION (IN SECOND QUARTER 1980 DOLLARS).

SOURCE INFORMATION

1) SOURCE NAME: Cottonwood Hills Recycling and Disposal Facility

2) DATE FORM PREPARED: 07/26/16

3) SOURCE ID NO. (IF KNOWN): 163075AAL

TRANSFER OF AUTHORITY

4) I, THE UNDERSIGNED, BEING A PRESIDENT, SECRETARY, TREASURER, OR VICE-PRESIDENT OF THE CORPORATION IN CHARGE OF BUSINESS FUNCTION, OR OTHER PERSON WHO PERFORMS SIMILAR POLICY OR DECISION MAKING FUNCTIONS FOR THE CORPORATION, HEREBY TRANSFER THE AUTHORITY AS A RESPONSIBLE OFFICIAL TO Joe Durako, THEY BEING A REPRESENTATIVE AND RESPONSIBLE FOR THE OVERALL OPERATION OF ONE OR MORE MANUFACTURING, PRODUCTION, OR OPERATING FACILITIES APPLYING FOR OR SUBJECT TO A PERMIT.

AUTHORIZED SIGNATURE	President TITLE OF SIGNATORY
Michael J. Watson TYPED OR PRINTED NAME OF SIGNATORY	July / 28 / 2016 DATE
Joe Durako DELEGATED REPRESENTATIVE	Senior District Manager TITLE OF DESIGNATED REPRESENTATIVE

THIS AGENCY IS AUTHORIZED TO REQUIRE THIS INFORMATION UNDER ILLINOIS REVISED STATUTES, 1991, AS AMENDED 1992, CHAPTER 111 1/2, PAR. 1039.5. DISCLOSURE OF THIS INFORMATION IS REQUIRED UNDER THAT SECTION. FAILURE TO DO SO MAY PREVENT THIS FORM FROM BEING PROCESSED AND COULD RESULT IN THE APPLICATION BEING DENIED. THIS FORM HAS BEEN APPROVED BY THE FORMS MANAGEMENT CENTER.

APPLICATION PAGE _____

FOR APPLICANT'S USE

Printed on Recycled Paper
500-CAAPP

ATTACHMENT 1

5-15 EXCEEDANCE REPORT: Cottonwood Hills Landfill

Range:

Report Generated:

01-Jul-2016 to 31-Dec-2016

12-Jan-2017 12:02:47PM

Exceedance at 0 to 5 days
Exceedance at 5 to 15 days
Exceedance at 15+ days
Returning to Non-Exceedance

Results for Oxygen (O2)

Range	Device ID	Monitoring Date/Time	Days Exceeded	% O2	% N2	Static Press	Gas Temp
0 to 5	CWHGT005	9/8/2016 3:22:40PM	Initial	8.6		-59.24	81.7
0 to 5	CWHGT005	9/8/2016 3:22:40PM	Initial	8.6		-59.21	80.6
0 to 5	CWHGT005	9/8/2016 3:24:44PM	0	8.1		-59.37	76.7
0 to 5	CWHGT005	9/8/2016 3:24:44PM	0	8.1		-59.35	76.7
5 to 15	CWHGT005	9/14/2016 11:34:29AM	6	12.6		-59.93	95.2
5 to 15	CWHGT005	9/14/2016 11:34:29AM	6	12.6		-59.69	96.4
OK	CWHGT005	9/15/2016 3:20:57PM	7	0.1		-56.82	98.3
OK	CWHGT005	9/15/2016 3:20:57PM	7	0.1		-59.24	98.7
0 to 5	CWHGT005	10/3/2016 1:43:22PM	Initial	17.1		-59.42	92.8
0 to 5	CWHGT005	10/3/2016 1:43:22PM	Initial	17.1		-59.42	92.5
OK	CWHGT005	10/7/2016 10:32:38AM	4	0.0		-58.07	90.6
OK	CWHGT005	10/7/2016 10:32:38AM	4	0.0		-58.10	90.7
0 to 5	CWHGT005	12/12/2016 1:23:03PM	Initial	5.9		-58.56	52.8
0 to 5	CWHGT005	12/12/2016 1:23:03PM	Initial	5.9		-58.56	52.8
0 to 5	CWHGT005	12/12/2016 1:25:11PM	0	6.2		-58.55	52.3
0 to 5	CWHGT005	12/12/2016 1:25:11PM	0	6.2		-58.55	52.3
5 to 15	CWHGT005	12/23/2016 2:57:31PM	11	12.1		-53.69	41.1
5 to 15	CWHGT005	12/23/2016 2:57:31PM	11	12.1		-53.70	41.1
15+	CWHGT005	1/9/2017 1:28:23PM	28	9.2		-58.40	44.2
15+	CWHGT005	1/9/2017 1:28:23PM	28	9.2		-58.49	44.4
0 to 5	CWHMW011	9/14/2016 2:21:09PM	Initial	20.5		-58.68	102.4
0 to 5	CWHMW011	9/14/2016 2:21:09PM	Initial	20.5		-59.25	102.3
0 to 5	CWHMW011	9/14/2016 2:23:03PM	0	20.6		-59.28	100.2
0 to 5	CWHMW011	9/14/2016 2:23:03PM	0	20.6		-59.30	100.4
5 to 15	CWHMW011	9/22/2016 1:28:39PM	8	18.6		-48.86	100.5
5 to 15	CWHMW011	9/22/2016 1:28:39PM	8	18.6		-48.86	100.5

5-15 EXCEEDANCE REPORT: Cottonwood Hills Landfill
Range: 01-Jul-2016 to 31-Dec-2016
Report Generated: 12-Jan-2017 12:02:47PM

Range	Device ID	Monitoring Date/Time	Days Exceeded	% O2	% N2	Static Press	Gas Temp
OK	CWHMW011	9/22/2016 1:43:35PM	8	0.1		-41.64	91.5
OK	CWHMW011	9/22/2016 1:43:35PM	8	0.1		-40.31	91.7
0 to 5	CWHMW011	10/3/2016 12:53:37PM	Initial	14.8		-51.19	80.0
0 to 5	CWHMW011	10/3/2016 12:53:37PM	Initial	14.8		-51.22	80.0
0 to 5	CWHMW011	10/3/2016 12:57:21PM	0	18.1		-49.91	79.1
0 to 5	CWHMW011	10/3/2016 12:57:21PM	0	18.1		-49.90	79.1
5 to 15	CWHMW011	10/10/2016 12:15:17PM	7	9.3		-39.37	79.8
5 to 15	CWHMW011	10/10/2016 12:15:17PM	7	9.3		-39.34	79.7
15+	CWHMW011	10/19/2016 3:51:34PM	16	0.0		-1.35	115.5
15+	CWHMW011	10/19/2016 3:51:34PM	16	0.0		-1.86	115.0
OK	CWHMW011	10/19/2016 3:55:29PM	16				
OK	CWHMW011	10/19/2016 3:55:29PM	16				
0 to 5	CWHMW084	12/12/2016 9:12:18AM	Initial	6.1		-1.75	111.8
0 to 5	CWHMW084	12/12/2016 9:12:18AM	Initial	6.1		-0.87	111.5
OK	CWHMW084	12/12/2016 9:15:09AM	0	4.1		-0.41	111.6
OK	CWHMW084	12/12/2016 9:15:09AM	0	4.1		-0.42	111.7
0 to 5	CWHMW088	9/8/2016 12:10:52PM	Initial	6.0		-1.50	117.1
0 to 5	CWHMW088	9/8/2016 12:10:52PM	Initial	6.0		-1.51	117.2
0 to 5	CWHMW088	9/8/2016 12:22:27PM	0	6.0		-1.36	117.1
0 to 5	CWHMW088	9/8/2016 12:22:27PM	0	6.0		-1.38	117.1
OK	CWHMW088	9/14/2016 1:57:52PM	6	3.3		-1.70	117.3
OK	CWHMW088	9/14/2016 1:57:52PM	6	3.3		-1.68	117.3
0 to 5	CWHMW088	10/3/2016 12:21:50PM	Initial	5.9		-1.24	115.6
0 to 5	CWHMW088	10/3/2016 12:21:50PM	Initial	5.9		-1.15	115.6
0 to 5	CWHMW088	10/3/2016 12:27:02PM	0	6.3		-1.00	116.2
0 to 5	CWHMW088	10/3/2016 12:27:02PM	0	6.3		-1.00	116.2
5 to 15	CWHMW088	10/10/2016 12:33:17PM	7	7.8		-0.80	120.4
5 to 15	CWHMW088	10/10/2016 12:33:17PM	7	7.6		-0.48	119.0
15+	CWHMW088	11/5/2016 3:01:45PM	33	4.3		-0.10	123.5
15+	CWHMW088	11/5/2016 3:01:45PM	33	4.9		-0.05	122.1
OK	CWHMW088	11/5/2016 3:03:03PM	33				
OK	CWHMW088	11/5/2016 3:03:03PM	33				
0 to 5	CWHMW08R	8/23/2016 2:00:19PM	Initial	8.9		-2.89	113.7
0 to 5	CWHMW08R	8/23/2016 2:00:19PM	Initial	8.9		-1.99	115.3

5-15 EXCEEDANCE REPORT: Cottonwood Hills Landfill
Range: 01-Jul-2016 to 31-Dec-2016
Report Generated: 12-Jan-2017 12:02:47PM

Range	Device ID	Monitoring Date/Time	Days Exceeded	% O2	% N2	Static Press	Gas Temp
0 to 5	CWHMW08R	8/23/2016 2:03:33PM	0	8.0		-1.82	116.4
0 to 5	CWHMW08R	8/23/2016 2:03:33PM	0	8.0		-1.81	116.5
5 to 15	CWHMW08R	9/6/2016 2:23:50PM	14	10.1		-0.67	127.3
5 to 15	CWHMW08R	9/6/2016 2:23:50PM	14	10.1		-0.34	126.0
5 to 15	CWHMW08R	9/6/2016 2:29:25PM	14	8.5		-0.41	126.6
5 to 15	CWHMW08R	9/6/2016 2:29:25PM	14	8.5		-0.26	125.3
15+	CWHMW08R	9/8/2016 12:01:03PM	16	2.9		-0.14	127.4
15+	CWHMW08R	9/8/2016 12:01:03PM	16	2.9		-0.13	127.7
OK	CWHMW08R	9/8/2016 12:16:28PM	16				
OK	CWHMW08R	9/8/2016 12:16:28PM	16				
0 to 5	CWHMW093	12/12/2016 2:00:14PM	Initial	15.1		-0.67	122.1
0 to 5	CWHMW093	12/12/2016 2:00:14PM	Initial	15.1		-0.45	109.3
0 to 5	CWHMW093	12/12/2016 2:07:21PM	0	14.2		-0.33	107.8
0 to 5	CWHMW093	12/12/2016 2:07:21PM	0	14.2		-0.36	101.7
5 to 15	CWHMW093	12/23/2016 3:08:41PM	11	0.0		-0.89	156.6
5 to 15	CWHMW093	12/23/2016 3:08:41PM	11	0.0		-0.88	156.6
OK	CWHMW093	12/23/2016 3:10:31PM	11				
OK	CWHMW093	12/23/2016 3:10:31PM	11				
0 to 5	CWHMW15R	11/5/2016 3:10:13PM	Initial	12.5		-2.37	107.6
0 to 5	CWHMW15R	11/5/2016 3:10:13PM	Initial	12.5		-1.60	107.4
0 to 5	CWHMW15R	11/5/2016 3:18:15PM	0	9.8		-1.68	110.0
0 to 5	CWHMW15R	11/5/2016 3:18:15PM	0	9.8		-1.75	110.1
OK	CWHMW15R	11/14/2016 2:11:36PM	9	2.0		-0.01	122.0
OK	CWHMW15R	11/14/2016 2:11:36PM	9	2.0		-0.01	122.1

5-15 EXCEEDANCE REPORT: Cottonwood Hills Landfill
Range: 01-Jul-2016 to 31-Dec-2016
Report Generated: 12-Jan-2017 12:02:47PM

Results for Static Pressure

Range	Device ID	Monitoring Date/Time	Days Exceeded	Static Press ("H2O)	% O2	% N2	Gas Temp
0 to 5	CWHM20R1	7/20/2016 1:38:02PM	Initial	0.95	0.0		92.1
OK	CWHM20R1	7/20/2016 1:38:02PM	0	-0.75	0.0		104.9
0 to 5	CWHMW084	7/26/2016 1:10:33PM	Initial	1.52	0.0		121.3
OK	CWHMW084	7/26/2016 1:10:33PM	0	-1.34	0.0		119.7

0 to 5	CWHMW088	7/26/2016 2:11:35PM	Initial	0.04	0.0		129.4
OK	CWHMW088	7/26/2016 2:11:35PM	0	-0.20	0.0		130.5
0 to 5	CWHMW15R	7/20/2016 2:31:32PM	Initial	0.08	0.0		102.7
0 to 5	CWHMW15R	7/20/2016 2:34:22PM	0	0.43	0.0		103.9
OK	CWHMW15R	7/20/2016 2:34:22PM	0	-0.15	0.0		104.2
0 to 5	CWHMW77R	7/7/2016 10:25:56AM	Initial	1.39	0.0		94.1
OK	CWHMW77R	7/7/2016 10:25:56AM	0	-1.38	0.0		101.8

5-15 EXCEEDANCE REPORT: Cottonwood Hills Landfill
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Results for Gas Temperature

Range	Device ID	Monitoring Date/Time	Days Exceeded	Gas Temp (oF)	% O2	% N2	Static Press
0 to 5	CWHGT004	9/14/2016 11:20:05AM	Initial	135.1	0.7		-7.36
0 to 5	CWHGT004	9/14/2016 11:20:05AM	0	135.0	0.7		-7.37
0 to 5	CWHGT004	9/14/2016 11:23:25AM	0	135.1	0.7		-7.39
0 to 5	CWHGT004	9/14/2016 11:23:25AM	0	135.1	0.7		-7.38
0 to 5	CWHGT004	9/15/2016 2:46:55PM	1	134.1	0.9		-7.75
0 to 5	CWHGT004	9/15/2016 2:46:55PM	1	134.4	0.9		-7.76
5 to 15	CWHGT004	9/22/2016 1:52:49PM	8	134.7	1.1		-9.30
5 to 15	CWHGT004	9/22/2016 1:52:49PM	8	134.7	1.1		-9.29
15+	CWHGT004	9/30/2016 12:56:11PM	16	133.6	1.3		-8.43
15+	CWHGT004	9/30/2016 12:56:11PM	16	133.6	1.3		-8.33
15+	CWHGT004	10/3/2016 1:34:40PM	19	134.3	1.1		-8.37
15+	CWHGT004	10/3/2016 1:34:40PM	19	134.3	1.1		-8.41

15+	CWHGT004	10/19/2016 5:19:30PM	35	103.9	0.9		-6.33
15+	CWHGT004	10/19/2016 5:19:30PM	35	103.9	0.9		-6.33
OK	CWHGT004	10/19/2016 5:20:09PM	35				
0 to 5	CWHMW077	5/9/2016 4:33:15PM	Initial	136.4	0.0		-30.94
0 to 5	CWHMW077	5/9/2016 4:33:15PM	0	136.4	0.0		-30.94
0 to 5	CWHMW077	5/10/2016 11:19:21AM	1	134.7	0.2		-31.89
0 to 5	CWHMW077	5/10/2016 11:19:21AM	1	135.0	0.2		-33.05
15+	CWHMW077	5/25/2016 12:15:10PM	16	137.1	0.0		-46.62
15+	CWHMW077	5/25/2016 12:15:10PM	16	137.0	0.0		-47.90
15+	CWHMW077	6/1/2016 1:24:35PM	23	138.9	0.0		-46.23
15+	CWHMW077	6/1/2016 1:24:35PM	23	138.0	0.0		-45.41
15+	CWHMW077	7/1/2016 1:47:27PM	53	140.6	0.0		-48.57

5-15 EXCEEDANCE REPORT: Cottonwood Hills Landfill
Range: 01-Jul-2016 to 31-Dec-2016
Report Generated: 12-Jan-2017 12:02:47PM

Range	Device ID	Monitoring Date/Time	Days Exceeded	Gas Temp (oF)	% O2	% N2	Static Press
15+	CWHMW077	7/1/2016 1:47:27PM	53	140.5	0.0		-49.81
OK	CWHMW077	7/7/2016 3:33:18PM	59				
0 to 5	CWHMW081	8/12/2016 2:34:36PM	Initial	137.1	0.0		-0.12
0 to 5	CWHMW081	8/12/2016 2:34:36PM	0	137.1	0.0		-0.12
OK	CWHMW081	8/18/2016 3:37:05PM	6	131.5	0.3		-1.91
0 to 5	CWHMW087	10/25/2016 12:51:41PM	Initial	145.7	0.0		-0.52
0 to 5	CWHMW087	10/25/2016 12:51:41PM	0	146.2	0.0		-0.68
0 to 5	CWHMW087	10/25/2016 12:55:25PM	0	146.4	0.0		-0.90
0 to 5	CWHMW087	10/25/2016 12:55:25PM	0	146.3	0.0		-0.89
5 to 15	CWHMW087	11/2/2016 8:10:22AM	8	144.2	0.1		-1.32
5 to 15	CWHMW087	11/2/2016 8:10:22AM	8	144.5	0.1		-1.55
5 to 15	CWHMW087	11/5/2016 4:46:07PM	11	143.6	0.0		-1.46
5 to 15	CWHMW087	11/5/2016 4:46:07PM	11	143.5	0.0		-1.60
15+	CWHMW087	12/12/2016 1:02:32PM	48	142.7	0.0		-1.26
15+	CWHMW087	12/12/2016 1:02:32PM	48	142.8	0.0		-1.27
15+	CWHMW087	1/9/2017 1:11:03PM	76	141.7	0.0		-0.65
15+	CWHMW087	1/9/2017 1:11:03PM	76	141.9	0.0		-0.72
0 to 5	CWHMW089	7/26/2016 1:35:53PM	Initial	136.0	0.0		-1.06
0 to 5	CWHMW089	7/26/2016 2:32:13PM	0	136.1	0.0		-1.07
0 to 5	CWHMW089	7/26/2016 2:32:13PM	0	136.3	0.0		-1.07
OK	CWHMW089	8/10/2016 10:56:42AM	15	117.0	4.8		-0.70
0 to 5	CWHMW08R	10/3/2016 12:14:50PM	Initial	138.0	1.1		-0.05
0 to 5	CWHMW08R	10/3/2016 12:14:50PM	0	138.6	1.1		-0.13

0 to 5	CWHMW08R	10/4/2016 11:10:40AM	1	137.8	3.7		-0.16
0 to 5	CWHMW08R	10/4/2016 11:10:40AM	1	137.2	3.7		-0.19
5 to 15	CWHMW08R	10/10/2016 12:26:28PM	7	133.3	0.0		-0.01
5 to 15	CWHMW08R	10/10/2016 12:26:28PM	7	135.2	0.0		-0.09
15+	CWHMW08R	11/5/2016 2:30:10PM	33	141.0	0.0		-0.02
15+	CWHMW08R	11/5/2016 2:30:10PM	33	141.8	0.0		-0.19
15+	CWHMW08R	12/12/2016 2:12:03PM	70	113.4	0.1		-0.02
15+	CWHMW08R	12/12/2016 2:12:03PM	70	116.2	0.1		-0.04

5-15 EXCEEDANCE REPORT: Cottonwood Hills Landfill
Range: 01-Jul-2016 to 31-Dec-2016
Report Generated: 12-Jan-2017 12:02:47PM

Range	Device ID	Monitoring Date/Time	Days Exceeded	Gas Temp (oF)	% O2	% N2	Static Press
OK	CWHMW08R	12/12/2016 2:15:47PM	70				
0 to 5	CWHMW091	10/18/2016 4:16:31PM	Initial	132.3	0.0		-0.01
0 to 5	CWHMW091	10/18/2016 4:16:31PM	0	132.8	0.0		-0.09
0 to 5	CWHMW091	10/18/2016 5:39:08PM	0	132.0	0.0		-0.14
0 to 5	CWHMW091	10/18/2016 5:39:08PM	0	132.0	0.0		-0.14
OK	CWHMW091	10/19/2016 11:23:35AM	1	130.3	0.0		-0.04
0 to 5	CWHMW091	10/19/2016 11:23:35AM	Initial	131.3	0.0		-1.22
OK	CWHMW091	10/19/2016 2:33:05PM	0	129.7	0.9		-1.37
0 to 5	CWHMW093	12/23/2016 3:08:41PM	Initial	156.5	0.0		-0.89
0 to 5	CWHMW093	12/23/2016 3:08:41PM	0	156.6	0.0		-0.88
OK	CWHMW093	12/23/2016 3:10:31PM	0				
0 to 5	CWHMW093	12/23/2016 3:11:36PM	Initial	157.0	0.0		-0.92
0 to 5	CWHMW093	12/23/2016 3:11:36PM	0	157.8	0.0		-0.26
5 to 15	CWHMW093	1/6/2017 12:25:28PM	14	97.5	20.0		-0.62
5 to 15	CWHMW093	1/6/2017 12:25:28PM	14	94.3	20.0		-0.44
5 to 15	CWHMW093	1/6/2017 12:27:30PM	14	90.2	20.1		-0.47

5 to 15	CWHMW093	1/6/2017 12:27:30PM	14	90.0	20.1		-0.48
15+	CWHMW093	1/9/2017 10:47:20AM	17	147.6	0.0		-0.01
15+	CWHMW093	1/9/2017 10:47:20AM	17	148.7	0.0		-0.01
15+	CWHMW093	1/9/2017 10:49:48AM	17	149.9	0.0		-0.06
15+	CWHMW093	1/9/2017 10:49:48AM	17	149.9	0.0		-0.05
0 to 5	CWHMW17R	7/20/2016 2:19:05PM	Initial	150.2	0.0		-3.93
0 to 5	CWHMW17R	7/20/2016 2:19:05PM	0	150.1	0.0		-3.23
0 to 5	CWHMW17R	7/20/2016 2:22:36PM	0	149.7	0.0		-1.71
0 to 5	CWHMW17R	7/20/2016 2:22:36PM	0	149.0	0.0		-0.91
OK	CWHMW17R	7/26/2016 1:22:51PM	6	142.0	0.0		-0.45
0 to 5	CWHMW77R	7/12/2016 9:59:28AM	Initial	132.0	0.9		-6.99

5-15 EXCEEDANCE REPORT: Cottonwood Hills Landfill
Range: 01-Jul-2016 to 31-Dec-2016
Report Generated: 12-Jan-2017 12:02:47PM

Range	Device ID	Monitoring Date/Time	Days Exceeded	Gas Temp (oF)	% O2	% N2	Static Press
0 to 5	CWHMW77R	7/12/2016 9:59:28AM	0	132.3	0.9		-7.57
0 to 5	CWHMW77R	7/12/2016 10:09:59AM	0	132.6	0.9		-7.81
0 to 5	CWHMW77R	7/12/2016 10:09:59AM	0	136.0	0.9		-17.81
0 to 5	CWHMW77R	7/12/2016 3:17:59PM	0	136.3	1.3		-22.60
0 to 5	CWHMW77R	7/12/2016 3:17:59PM	0	136.3	1.3		-22.60
0 to 5	CWHMW77R	7/12/2016 3:33:27PM	0	136.3	1.3		-22.75
0 to 5	CWHMW77R	7/12/2016 3:33:27PM	0	134.5	1.3		-17.93
OK	CWHMW77R	7/15/2016 2:07:49PM	3	135.1	1.2		-8.74
0 to 5	CWHMW77R	7/20/2016 1:51:45PM	Initial	140.3	0.8		-17.06
OK	CWHMW77R	7/20/2016 1:51:45PM	0	139.8	0.8		-15.94
0 to 5	CWHMW80R	7/1/2016 11:40:40AM	Initial	144.2	0.0		-56.52
0 to 5	CWHMW80R	7/1/2016 11:40:40AM	0	144.2	0.0		-56.51
15+	CWHMW80R	7/20/2016 2:55:10PM	19	142.5	0.0		-39.16
15+	CWHMW80R	7/20/2016 2:55:10PM	19	142.4	0.0		-39.19
OK	CWHMW80R	7/20/2016 3:41:39PM	19				

Results for Nitrogen (N2)

Range	Device ID	Monitoring Date/Time	Days Exceeded	% N2	% O2	Static Press	Gas Temp

ATTACHMENT 2

COTTONWOOD HILLS RECYCLING AND DISPOSAL FACILITY
USEPA GAS WELL VARIANCE APPROVALS AND REQUESTS

Gas Well	Approved Temp	USEPA Approval Date
MW07R1	145 F	10/31/13
MW08	141 F	10/31/13
MW09R	141 F	10/31/13
MW10R	145 F	10/31/13
MW17R	147 F	09/12/16
MW19	144 F	10/31/13
MW20R	135 F	07/05/16
MW77R	140 F	09/12/16
MW80R	143 F	07/05/16
MW81	137 F	09/12/16
MW87	Request Submitted for 147 F to USEPA on 11/03/16	Request Submitted for 147 F to USEPA on 11/03/16
MW89	136 F	09/12/16
MW93	143 F	09/12/16

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

JUL 0 5 2016

REPLY TO THE ATTENTION OF

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Ernest H. Dennison
District Engineer
Waste Management of Illinois, Inc.
601 Madison Road
East St. Louis, Illinois 62201

RE: Request for HOV for Wells MW20R, MW77, and MW80R at Cottonwood Hills Recycling and Disposal Facility

Dear Mr. Dennison:

The U.S. Environmental Protection Agency has received and reviewed Waste Management of Illinois' (WMIL's) June 3, 2016 request for a higher operating value (HOV) for temperature pursuant to 40 C.F.R. § 60.753(c) for wells MW20R, MW77, and MW80R at the Cottonwood Hills Recycling and Disposal Facility (Cottonwood Hills RDF) located in Marissa, Illinois. The Cottonwood Hills RDF is subject to 40 C.F.R. Part 60, Subpart WWW (the Landfill NSPS).

40 C.F.R. § 60.753(c) of the Landfill NSPS states:

> Each owner or operator of [a municipal solid waste] landfill with a gas collection and control system used to comply with the provisions of §60.753(b)(2)(ii) of this subpart shall: Operate each interior wellhead in the collection system with a landfill gas temperature less than 55°C (131°F) and with either a nitrogen level less than 20 percent or an oxygen level less than 5 percent. The owner or operator may establish a higher operating temperature, nitrogen, or oxygen value at a particular well. A higher operating value demonstration shall show supporting data that the elevated parameter does not cause fires or significantly inhibit anaerobic decomposition by killing methanogens.

WMIL's letter requests an HOV for temperature at well MW20R of 135° F, at well MW77 of 140 ° F, and at well MW80R of 143° F. WMIL states that wells need to be "tuned" to ensure that the maximum amount of gas can be withdrawn by the well, without compromising the decomposition process and methane generation. WMIL indicates that for some areas of the landfill, maintaining the temperature below 131° F requires the well to operate at a low extraction rate. WMIL states that allowing a higher operating temperature would allow WMIL to capture and control more landfill gas without compromising the decomposition process and methane generation.

EPA reviewed oxygen, methane, and carbon monoxide monitoring data at well MW20R, MW77, and MW80R submitted by WMIL. This information suggest the proposed HOVs at these wells are not caused by a fire and do not seem to be significantly inhibiting anaerobic decomposition by killing methanogens. For these reasons, EPA approves WMIL's requests for the following HOVs:

MW20R: 135° F
MW77: 140 ° F
MW80R: 143° F

If you have any further questions please contact Nathan Frank of my staff at 312-886-3850.

Sincerely,

for

Sara Breneman
Chief
Air Enforcement and Compliance Assurance Branch

cc: Yasmine Keppner-Bauman, Acting Manager
Bureau of Air, Compliance Unit
Illinois Environmental Protection Agency

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

SEP 1 2 2016

REPLY TO THE ATTENTION OF

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Ernest H. Dennison
District Engineer
Waste Management of Illinois, Inc.
601 Madison Road
East St. Louis, Illinois 62201

RE: Request for HOV for Wells MW17R, MW77R, MW81, MW89 and MW93 at Cottonwood Hills Recycling and Disposal Facility

Dear Mr. Dennison:

The U.S. Environmental Protection Agency has received and reviewed Waste Management of Illinois' (WMIL's) July 15, 2016 and August 17, 2016 requests for higher operating values (HOVs) for temperature pursuant to 40 C.F.R. § 60.753(c) for wells MW17R, MW 77R, MW81, MW89 and MW93 at the Cottonwood Hills Recycling and Disposal Facility (Cottonwood Hills RDF) located in Marissa, Illinois. The Cottonwood Hills RDF is subject to 40 C.F.R. Part 60, Subpart WWW (the Landfill NSPS).

40 C.F.R. § 60.753(c) of the Landfill NSPS states:

> Each owner or operator of [a municipal solid waste] landfill with a gas collection and control system used to comply with the provisions of §60.753(b)(2)(ii) of this subpart shall: Operate each interior wellhead in the collection system with a landfill gas temperature less than 55°C (131°F) and with either a nitrogen level less than 20 percent or an oxygen level less than 5 percent. The owner or operator may establish a higher operating temperature, nitrogen, or oxygen value at a particular well. A higher operating value demonstration shall show supporting data that the elevated parameter does not cause fires or significantly inhibit anaerobic decomposition by killing methanogens.

WMIL's letters request an HOV for temperature at several wells at the Cottonwood Hills RDF. WMIL states that the requested HOVs are necessary to properly operate the wells and capture/control landfill gas, and to maintain a sufficient vacuum on the wells. WMIL asserts that there have been no signs of subsurface fires in the vicinity of these wells.

EPA reviewed oxygen, methane, and carbon monoxide monitoring data at wells MW17R, MW 77R, MW81, MW89 and MW93 submitted by WMIL. This information suggests the proposed HOVs at these wells are not caused by a fire and do not seem to be significantly inhibiting

anaerobic decomposition by killing methanogens. For these reasons, EPA approves WMIL's requests for the following HOVs:

MW17R: 147° F
MW77R: 140° F
MW81: 137° F
MW89: 136° F
MW93: 143° F

EPA recommends that WMIL pay careful attention to wells MW17R and MW93, as these wells have relatively high measurements of carbon monoxide of 500 ppm. WMIL should continue to watch these wells for increases in temperature or the carbon monoxide level.

If you have any further questions please contact Nathan Frank of my staff at 312-886-3850.

Sincerely,

Sara Breneman

Sara Breneman
Chief
Air Enforcement and Compliance Assurance Branch

cc: Yasmine Keppner-Bauman, Acting Manager
Bureau of Air, Compliance Unit
Illinois Environmental Protection Agency

WASTE MANAGEMENT
601 Madison Road
East St Louis, IL 62201
(618) 271-6788
(618) 271-1227 Fax

November 3, 2016

USEPA (AE-17J) – Air & Radiation Division
Air Enforcement and Compliance Assurance Branch
77 West Jackson Boulevard
Chicago, Illinois 60604

Cottonwood Hills Recycling and Disposal Facility - Site I.D. No. 163075AAL
Request for Higher Operating Temperature in Landfill Gas Well MW87

Dear Sir/Madam:

This letter is written to provide notification that the temperature in landfill gas extraction well MW87 exceeded the 55°C (131°F) temperature limit and to request approval of a higher operating temperature.

MW87

Landfill gas extraction well MW87 was installed on September 29, 2016 and subsequently connected to the landfill gas collection header system in October 2016. Refuse temperatures of the waste removed during drilling ranged from 78°F to 160°F (see attached drilling summary log). The initial gas temperature reading taken on October 25, 2016 was above the 55°C (131°F) temperature limit (see attached table of gas data for well MW87). The vacuum was adjusted to try to reduce the temperature but the resulting temperatures were still above the regulatory limit. In order to properly operate the well and capture/control landfill gas, the facility needs to be able keep a sufficient vacuum on the well. There has not been any smoke, subsidence nor evidence of fire around the well and carbon monoxide readings were less than 100 ppm. There is no reason to believe there are any structural problems related to the operation of the well since it is a newly installed well and oxygen levels in the well are less than 5%. Therefore, this letter **requests a temperature variance of 147°F be approved for gas well MW87** which will allow the facility to properly operate the well with a sufficient vacuum to capture/control the landfill gas being generated. Please note that 12 other landfill gas collection wells at the facility have USEPA approved temperature variances ranging from 135°F to 147°F.

If you require additional information, please call me at (314) 568-2025.

Sincerely,
Waste Management of Illinois, Inc.

Ernest H Dennison, PE.
District Engineer

cc: IEPA-BOA-Compliance and Enforcement Section
1021 North Grand Avenue East
Springfield, Illinois 62702

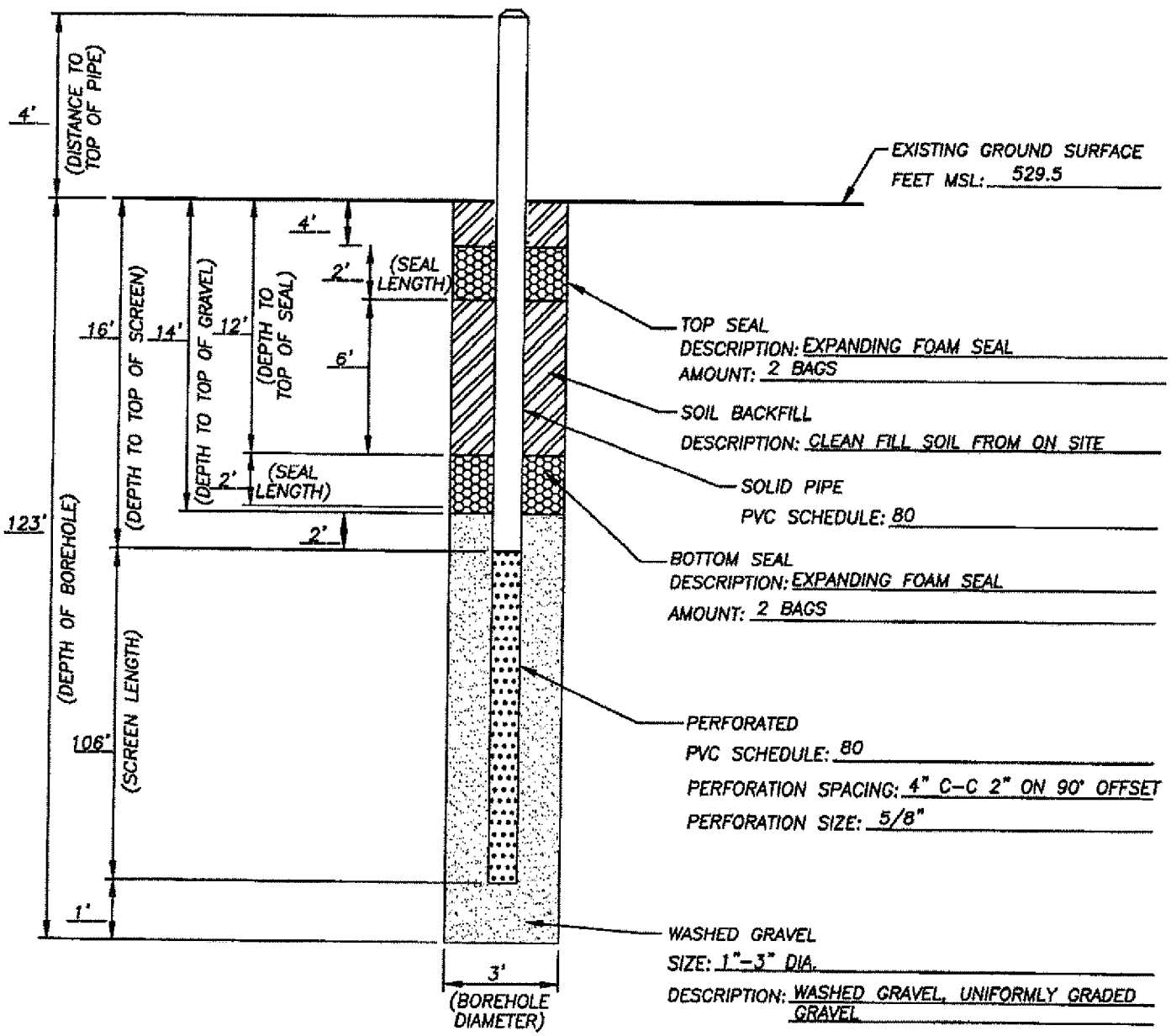
COTTONWOOD HILLS RECYCLING AND DISPOSAL FACILITY
LANDFILL GAS EXTRACTION WELL MW87

Device ID	Date Time	CH4 %	CO2 %	O2 %	Initial Static Pressure ("H2O)	Initial Temperature (Deg F)	Adjusted Temperature (Deg F)	Adjusted Static Pressure ("H2O)	Initial Flow SCFM	Adjusted Flow SCFM	CO ppm
MW87	10/25/2016 12:51	53.9	43.2	0	-0.52	145.7	146.2	-0.68	17.5	20	
MW87	10/25/2016 12:55	54.1	43.3	0	-0.9	146.4	146.3	-0.89	22.1	22.1	< 100
MW87	11/2/2016 8:10	52.9	42	0.1	-1.32	144.2	144.5	-1.55	21.2	24.5	< 100

GAS WELL CONSTRUCTION DIAGRAM

PROJECT NUMBER: 0086-440-52-03
PROJECT NAME: COTTONWOOD HILLS – PHASE 2 GCCS CQA
GAS WELL NO.: MW87
WELL LOCATION: 578889N 611290E
INSTALLATION START DATE: 9/29/16
COMPLETION DATE: 9/29/16
DRILLER: COLEMAN AND SON
INSPECTOR: MATT ROTHER

COMMENTS:



WM02758

Gas Extraction Well Drilling Summary

Weaver Consultants Group

Project Name:	Cottonwood Hills Phase 1 GCCS CQA	Project Number:	0086-440-52-03
Project Location:	Cottonwood Hills RDF - Marissa, Illinois	QA/QC Monitor:	Matt Rother
Well No.:	MW87	Elevation:	529.5
Exact Location (Coordinates):	N:578888.65		E:611289.94
Date Started:	9/29/2016	Date Completed:	9/29/2016
Boring Size:	36"	Total Depth:	123'
Length of Perforated Pipe:	106'	Length of Solid Pipe:	20'
Comments:			

Depth	Material Drilled	Temp.	Comment
0-5	MSW/SOIL	78	DRY
6-10	MSW	83	DRY
11-20	MSW	94	DRY
21-30	MSW	113	MOIST
31-40	MSW	124	MOIST
41-50	MSW	122	MOIST
51-60	MSW	120	MOIST
61-70	MSW	120	MOIST
71-80	MSW	145	MOIST
81-90	MSW	150	MOIST
91-100	MSW	160	MOIST
101-110	MSW	146	MOIST
111-120	MSW	138	MOIST
121-125	MSW	136	MOIST
131-140			
141-150			
151-160			
161-170			
171-180			
181-190			
191-200			

ATTACHMENT 3

COTTONWOOD HILLS GAS COLLECTION SYSTEM
REPORTING FOR NON OPERATING PERIODS OF CONTROL DEVICE
3000 SCFM OPEN FLARE

Time Out of Service	Description of Outage and Any Corrective Action	Time Back In Service	Down Time Hours	Performed By
7/3/16 2:58 AM	Utility Outage from Storms	7/3/16 8:00 AM	5.0	MM
7/8/16 4:48 AM	GCCS construction / Shutdown for header tie-ins	7/8/16 11:32 AM	6.7	MM
7/10/16 6:42 PM	Ran out of nitrogen / replaced tank	7/10/16 8:22 PM	1.7	MM
7/12/16 7:50 AM	GCCS construction / Shutdown for header tie-ins	7/12/16 8:48 AM	1.0	MM
7/14/16 3:18 PM	GCCS construction / Shutdown for header tie-ins	7/14/16 4:24 PM	1.1	MM
7/19/16 12:08 PM	GCCS construction / Shutdown for header tie-ins	7/19/16 4:04 PM	3.9	MM
7/21/16 2:02 PM	PLC malfunction - possible venting period	7/21/16 3:42 PM	1.67	MM
7/21/16 11:44 PM	PLC malfunction - possible venting period	7/22/16 2:54 AM	3.17	MM
7/22/16 2:58 AM	Manual shutdown to troubleshoot PLC malfunction, manual restart, PLC subsequently replaced	7/22/16 4:06 AM	1.1	MM
7/24/16 9:22 PM	Utility Outage from Storms, Auto-restart	7/24/16 11:30 PM	2.1	MM
7/25/16 1:28 PM	GCCS construction / Shutdown for header tie-ins	7/25/16 6:36 PM	5.1	MM
7/28/16 2:16 PM	GCCS construction / Shutdown for header tie-ins	7/28/16 4:06 PM	1.8	MM
8/3/16 7:22 AM	Missing data, storms tripper data recorder breaker, reset	8/4/16 7:58 AM	24.6	MM
8/10/16 11:00 AM	GCCS construction / Shutdown for header and well tie-ins	8/10/16 1:16 PM	2.3	MM
8/28/16 5:10 PM	Voltage drop caused blower interlock to trip and shut down flare, no repairs necessary, flare manually restarted	8/28/16 7:26 PM	2.3	MM
10/4/16 1:20 PM	Shut down to connect new gas header piping	10/4/16 2:34 PM	1.2	MM
10/6/16 7:50 AM	Shut down to replace flare control panel	10/7/16 12:50 PM	29.0	MM
10/12/16 6:00 AM	Shut down to connect new gas header piping	10/12/16 8:06 AM	2.1	MM
11/20/16 3:52 AM	Auto shut down ran out of nitrogen - replace nitrogen bottle	11/20/16 9:00 AM	5.1	BA
12/17/16 10:16 PM	Partially clogged condensate sump pump at flare caused erroneous flow readings on data recorder	12/18/16 4:04 PM	0.0	BA
12/18/16 4:04 PM	Shut down, condensate pump pulled and clog removed	12/18/16 5:40 PM	1.6	BA
12/19/16 9:44 AM	Shut down, condensate pump checked and cleaned again	12/19/16 11:04 AM	1.3	BA
		TOTAL	103.9	

Per Sec. 60.757 : "Each owner or operator...shall include the following information with the annual report... description and duration of all periods when the control device was not operating for a period exceeding one hour and length of time the control device was not operating."

Verified by :

Mike McElvain Gas Technician

Brad Anderson Gas Technician

WM02761

ATTACHMENT 4

COTTONWOOD HILLS RECYCLING AND DISPOSAL FACILITY
QUARTERLY SURFACE SCAN MONITORING EXCEEDENCES
FOR JULY 1, 2016 TO DECEMBER 31, 2016 REPORT PERIOD

Quarter	Date	Location		Methane Conc ppm	Corrective Action	Date	Methane Conc ppm	Additional Corrective Action	Date	Methane Conc ppm
		North	West							
3rd	09/29/16			All < 280	None Required			NA		
4th	11/07/16			All < 350	None Required			NA		

Surface Emissions Monitoring performed by gas technicians Mike McElvain and/or Brad Anderson

ATTACHMENT 5

Cottonwood Hills Recycling and Disposal Facility
Gas Wells Installed During Reporting Period

Gas Well	Date Installed	North Coordinate	East Coordinate	Ground Elevation	Well Length
MW08R	07/14/16	579210	611032	505	99
MW14R1	07/11/16	579037	611270	530	124
MW15R	07/13/16	578845	610928	484.1	82
MW17R	07/15/16	578579	611247	514	115
MW20R1	07/12/16	579234	611296	535	129
MW77R	07/06/16	579421	611418	536	130
MW84	07/15/16	579563	611708	491	88
MW85	07/12/16	579193	611691	521	118
MW86	09/28/16	578731	611350	520.5	130
MW87	09/29/16	578889	611290	529.5	123
MW88	07/14/16	579032	611043	507	103
MW89	07/13/16	578677	610993	495	94
MW90	09/28/16	578569	611107	522.4	125
MW91	09/30/16	578402	611098	517.5	121
MW92	09/30/16	578301	610958	490.4	94
MW93	07/13/16	579393	611095	525	121
MW94	10/04/16	578172	611077	473.5	77
MW95	09/29/16	578283	611154	478.3	83